UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,571	04/30/2001	Yves Schabes	401122.0005	5344

77027   7590   04/27/2010

Williams Mullen
222 Central Park Ave
Suite 1700
Virginia Beach, VA 23462

EXAMINER
CHOJNACKI, MELLISSA M

ART UNIT	PAPER NUMBER
2164	

MAIL DATE	DELIVERY MODE
04/27/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 January 2010</u>.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>47-60</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>47-60</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   In response to communications filed on January 25, 2010, no claims have

been amended, claims 1-5, and 32-46 have been cancelled and new claims 47-

60 have been added. Therefore, claims 47-60 are presently pending in this

application.

Claim Objections

2.   The specification is objected to as failing to provide proper antecedent

basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP

§ 608.01(o). Correction of the following is required:

3.   Claim 54, discloses a "computer readable medium", however, "computer

readable medium" is not defined or even mentioned in the specification.

Therefore, fails to provide proper antecedent basis for the claimed subject

matter.

        Claims 55-60 are objected to because they are dependent upon rejected

independent claim 54.

        Claims 47 and 54, disclose a "order and type", however, it is unclear what

"order and type" is or signifies within the claim language. Clarification is required.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   Claims 54-60 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 54, discloses a "computer readable medium", however, "computer readable medium" is not defined in the specification. Therefore, since there is no reasonable definition of "computer readable medium" in the specification, the examiner is then permitted to give the claims their broadest reasonable interpretation ("computer readable medium" may be interpreted as non-statutory subject matter such as a signal, transmission, wave, etc. ...), claim 54 is rejected under 35 U.S.C. 101 for being directed to non-statutory subject matter. A Signal is not one of the four categories of invention and therefore, this claim is not statutory. The signal is not a series of steps or acts and thus is not a process. The signal is not a physical article or object and as such is not a machine or manufacture. The Signal is not a combination of substances and therefore, not a composition of matter (See In re Nuijten). Furthermore, the drawings do disclose a "personal computer" however, it is unclear whether the "personal computer" is considered to be the "computer readable medium" disclosed in the claim language.

Allowable Subject Matter

6.   The following is a statement of reasons for the indication of allowable subject matter:

The examiner believes that if the applicant elaborates upon (defines)

"table of predetermined question patterns" as disclosed in the specification and

"affirmative statement" within the independent claims (Claims 47 and 54) then the

claim language could potentially be allowable, if all other objections and

rejections are fixed. The claims disclose "Affirmative statement pattern", which is

not clearly understood because the claims only state that the "Affirmative

statement pattern" includes "syntactic and morphological categories; and (ii) the

at least one partially unspecified term". Therefore, it is unclear if the "Affirmative

statement pattern" is "syntactic and morphological categories; and (ii) the at least

one partially unspecified term" or if there is (are) other feature(s) a part of it? The

examiner could not find clarification within the Specification. Also, as addressed

below in the arguments if the applicants amends the claim language to reflect the

argument that the categories are not or can be read on "words" then the

application would be in a condition for allowance pending an updated search.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   Claims 1, 3-11, 14 and 29-31 are rejected under 35 U.S.C. 102(e) as

being anticipated by <u>Brown et al.</u> (U.S. Patent No. 6,665,666).

A method of providing an answer to a user supplied natural language

question based on stored information on a computer-readable medium (See

abstract; column 1, lines 22-27), comprising:

receiving a user supplied natural language question via a computer user

interface in which the user supplied natural language question includes a

question word (See column 1, lines 58-67; column 2, lines 1-67);

generating an analyzed question comprised of syntactic and

morphological categories derived from the user supplied natural language

question (See column 3, lines 48-67; column 4, lines 1-14; column 5, lines 7-10;

column 11, lines 61-65);

determining which question pattern from a table of predetermined

questions patterns corresponds to the analyzed question by matching the order

and type of syntactic and morphological categories derived from the user

supplied natural language question to the order and type of syntactic and

morphological categories of the predetermined question patterns (See column 1,

lines 37-57; column 3, lines 56-66, where "predetermined question patterns" is

read on "templates"; column 5, lines 11-67; column 6, lines 1-5, where "matching"

the users query is disclosed to "question patterns" (question templates)"; column

14, lines 3-48);

replacing the question word with at least one partially unspecified term

that is conceptually related to the question word and the answer (See column 1,

lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the words are

replaced with "partially unspecified statements" (QA-Tokens); column 14, lines 3-

48);

transforming the question pattern into an affirmative statement pattern that

includes: (i) syntactic and morphological categories (See column 1, lines 37-57;

column 14, lines 3-48); and (ii) the at least one partially unspecified term (See

column 1, lines 37-57; column 5, lines 11-67; column 13, lines 32-43, wherein the

words are replaced with "partially unspecified statements" (QA-Tokens); column

14, lines 3-48);

generating a partially unspecified query based on the affirmative

statement pattern, the partially unspecified query containing the at least one

partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67;

column 13, lines 32-43, wherein the words are replaced with "partially

unspecified statements" (QA-Tokens); column 14, lines 3-48); and

determining at least one answer to the user supplied natural language

question by matching the partially unspecified query to the stored information

wherein the at least one partially unspecified term is further matched to a specific

term in the stored information (See abstract; column 3, lines 38-67; column 4,

lines 1-13).

As to claims 48, and 55, Brown et al., teaches transforming matched

question patterns into one or more partially unspecified statements using

syntactic frames (See Brown et al., column 1, lines 37-57; column 14, lines 3-48).

As to claims 49, and 56, <u>Brown et al.</u> teaches wherein the stored

information comprises a set of documents and an index identifying which

documents within the set of documents contain terms or groups of terms

answering the partially unspecified queries (See <u>Brown et al.,</u> abstract; column 1,

lines 38-52; column 4, lines 50-53; column 5, lines 33-35, lines 50-57).

As to claims 50, and 57, <u>Brown et al.,</u> teaches collecting answers from

matching the partially unspecified query across a plurality of documents in the

stored information (See <u>Brown et al.,</u> abstract; column 3, lines 48-60).

As to claims 51, and 58, <u>Brown et al.</u> teaches ranking the at least one

answers according to their frequency of matching (See <u>Brown et al.,</u> column 9,

lines 4-10; column 13, lines 11-17).

As to claims 52, and 59, <u>Brown et al.</u> teaches wherein transforming the

question pattern into an affirmative statement pattern further comprises replacing

a generic syntactic or morphological category with one or more corresponding

elements from the user supplied natural language question (See <u>Brown et al.,</u>

abstract; column 1, lines 37-57; column 14, lines 3-48).

As to claims 53, and 60, <u>Brown et al.,</u> teaches wherein a first of the

partially unspecified statements is transformed into more than one partially

unspecified queries in accordance with a mapping of a question word to more

than one corresponding partially unspecified term (See <u>Brown et al.</u>, column 3,

lines 48-60; column 4, lines 1-13; column 9, lines 38-40).

As to claim 54, <u>Brown et al.</u> teaches a computer readable medium storing

a computer program product for providing an answer to a user supplied natural

language question based on stored information (See abstract; column 1, lines

22-27), comprising:

computer program code for receiving a user supplied natural language

question via a computer user interface in which the user supplied natural

language question includes a question word (See column 1, lines 58-67; column

2, lines 1-67);

computer program code for generating an analyzed question comprised of

syntactic and morphological categories derived from the user supplied natural

language question (See column 3, lines 48-67; column 4, lines 1-14; column 5,

lines 7-10; column 11, lines 61-65);

computer program code for determining which question pattern from a

table of predetermined questions patterns corresponds to the analyzed question

by matching the order and type of syntactic and morphological categories derived

from the user supplied natural language question to the order and type of

syntactic and morphological categories of the predetermined question patterns

(See column 1, lines 37-57; column 3, lines 56-66, where "predetermined

question patterns" is read on "templates"; column 5, lines 11-67; column 6, lines

1-5, where "matching" the users query is disclosed to "question patterns"

(question templates)"; column 14, lines 3-48);

computer program code for replacing the question word with at least one

partially unspecified term that is conceptually related to the question word and

the answer (See column 1, lines 37-57; column 5, lines 11-67; column 13, lines

32-43, wherein the words are replaced with "partially unspecified statements"

(QA-Tokens); column 14, lines 3-48);

computer program code for transforming the question pattern into an

affirmative statement pattern that includes: : (i) syntactic and morphological

categories (See column 1, lines 37-57; column 14, lines 3-48); and (ii) the at least

one partially unspecified term (See column 1, lines 37-57; column 5, lines 11-67;

column 13, lines 32-43, wherein the words are replaced with "partially

unspecified statements" (QA-Tokens); column 14, lines 3-48);

computer program code for generating a partially unspecified query based

on the affirmative statement pattern, the partially unspecified query containing

the at least one partially unspecified term (See column 1, lines 37-57; column 5,

lines 11-67; column 13, lines 32-43, wherein the words are replaced with

"partially unspecified statements" (QA-Tokens); column 14, lines 3-48); and

computer program code for determining at least one answer to the user

supplied natural language question by matching the partially unspecified query to

the stored information wherein the at least one partially unspecified term is

further matched to a specific term in the stored information (See abstract; column

3, lines 38-67; column 4, lines 1-13).

Response to Arguments

9.   Applicant's arguments filed on 25-January-2010, with respect to the

rejected claims 47-60 have been fully considered but they are not found to be

persuasive:

In response to applicants' arguments regarding "***Brown does not teach***

parsing the question (query) into a series of syntactic or morphological

categories in order to derive a likely statement pattern for the answer. The

data representing a QA-token may arguably be characterized as a syntactic

category but the remainder of the query is not parsed into a "series" of

syntactic categories. Nor does Brown generate an analyzed question

comprised of the syntactic categories of the parsed question. Brown's

analyzed query for the example "When did the Challenger explode" gets

translated on query analysis to the bag of words{@$YN(TIME$, DATES)

Challenger explode}(see Brown '666, col. 5, lns. 58-66). This analyzed

question (query) clearly is not comprised exclusively of syntactic

categories since it contains the actual search terms "Challenger" and

"explode". Even giving Brown a generous reading on the "generating an

analyzed query ..." step of the present application, Brown essentially stops

there and submits the "bag of words" for matching against a body of

documents. Thus, Brown simply does not perform the steps claimed in the

present application," the arguments have been fully considered but are not

found to be persuasive, because examiner suggests clarifying that the "syntactic

categories" are not just words but a "structure or format", within the claim

language. Furthermore, "*remainder of the query is not parsed into a "series"*

of syntactic categories. Nor does Brown generate an analyzed question

comprised of the syntactic categories of the parsed question", such

language is not found in the claim(s).

In response to applicants' arguments regarding *Brown '666 does not*

disclose question analysis that parses, identifies, and assigns syntactic or

morphological categories to portions of the question, or any use of

syntactic or morphological categories in the process of creating a query. In

stark contrast, the present invention generates an analyzed question that

specifically identifies syntactic or morphological categories such as noun

phrase (NP) and assigns the categories to portions of the question, as

demonstrated in the example analyzed question. Similarly, Brown '666 does

not teach or suggest identifying predetermined question patterns within

the analyzed question. As discussed above, Brown '666 discloses testing

the question to see if specific words or phrases from a pattern file are

located in the question. On the other hand, the predetermined question

pattern of the present invention is a pattern of syntactic and morphological

categories as exemplified by "WH1 NP0 V." not of the words themselves.

(See ¶ [0078] - ¶ [0079] of the published application.)" the arguments have

been fully considered but are not found to be persuasive, because again the

examiner suggest clarifying the claim language to reflect "*syntactic and*

morphological categories as exemplified by "WH1 NP0 V." not of the words

themselves" specifically pointing out that the categories are <u>not words</u> in order

to distinguish it from the prior art. Although the claims are interpreted in light of

the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

     The following patents are cited to further show the state of the art with

respect to a system for answering natural language questions in general:

     U.S. Patent No. 5,625,553 to <u>Kutsumi et al.</u>, for disclosing a machine

translation system generating a default translation.

11.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to MELLISSA M. CHOJNACKI whose telephone

number is (571)272-4076. The examiner can normally be reached on 9:00am-

5:30pm.

     If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The

fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

April 22, 2010
Mmc

/Charles Rones/
Supervisory Patent Examiner, Art Unit 2164